

WHAT IS CLAIMED IS:

1. An electronically commutated brushless motor comprising:
 - a motor housing;
 - a bulge formed in a sidewall of said motor housing; and
 - a capacitor assembly including a printed circuit board and at least one capacitor, said capacitor assembly housed in said bulge.
2. The motor of Claim 1 wherein said capacitor assembly is slideably inserted into said bulge.
3. The motor of Claim 1 wherein said bulge comprises a plurality of channels located along an inside surface of a sidewall of said bulge.
4. The motor of Claim 3 wherein said capacitor assembly comprises:
 - a capacitor printed circuit board (PCB) comprising a plurality of longitudinal edges; and
 - at least one capacitor mounted on said capacitor PCB.
5. The motor of Claim 4 wherein said longitudinal edges of said capacitor PCB are slideably inserted in said channels.

6. The motor of Claim 4 wherein said capacitor assembly further comprises a plurality of stiffeners, one of said stiffeners being attached to each of said longitudinal edges of said capacitor PCB, and said stiffeners being slideably inserted in said channels.

7. The motor of Claim 6 wherein said stiffeners have a tapered shape, and said channels have correspondingly tapered shape.

10069197 122001

8. A method for constructing an electronically commutated brushless motor, said method comprising:

providing a motor housing having a bulge formed in a sidewall of the motor housing; and

providing a capacitor assembly; and

slideably inserting the capacitor assembly in the bulge.

9. The method of Claim 8 wherein providing a capacitor assembly comprises:

providing a capacitor printed circuit board (PCB) having a plurality of longitudinal edges; and

mounting at least one capacitor on the capacitor PCB.

10. The method of Claim 9 wherein slideably inserting comprises:

providing a plurality of channels along an inside surface of a sidewall of the bulge; and

slideably inserting the longitudinal edges of the capacitor PCB in the channels.

11. The method of Claim 8 wherein providing a capacitor assembly comprises:

providing a capacitor PCB having a plurality of longitudinal edges;

mounting at least one capacitor on the capacitor PCB; and

attaching a stiffener to each longitudinal edge.

12. The method of Claim 11 wherein slideably inserting comprises:

providing a plurality of channels along an inside surface of a sidewall of the bulge; and

slideably inserting the stiffeners in the channels.

13. The method of Claim 11 wherein attaching a stiffener comprises attaching a drafted stiffener having a tapered shape to each longitudinal edge.

14. The method of Claim 13 wherein slideably inserting comprises:

providing a plurality of channels located along an inside surface of a sidewall of the bulge, the channels having a tapered shape corresponding to the tapered shape of the drafted stiffeners; and



Client Reference No. PD-TN-3007
Attorney Docket No. 0275L-000528

slideably inserting the drafted stiffeners in the tapered channels.

10029197 122001

15. An electronically commutated brushless motor comprising:

a motor housing comprising a bulge formed in a sidewall of said motor housing;

a plurality of channels located along an inside surface of a sidewall of said bulge; and

a capacitor assembly slideably inserted in said bulge utilizing said channels.

16. The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor printed circuit board (PCB) comprising a plurality of longitudinal edges, said longitudinal edges slideably inserted in said channels; and

at least one capacitor mounted on said capacitor PCB.

17. The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor PCB comprising a plurality of longitudinal edges,

at least one capacitor mounted on said capacitor PCB; and

a stiffener attached to each of said longitudinal edges of said capacitor PCB, said stiffeners slideably inserted in said channels.

18. The motor of Claim 15 wherein said capacitor assembly comprises:

a capacitor PCB comprising a plurality of longitudinal edges,

at least one capacitor mounted on said capacitor PCB; and

a drafted stiffener having a tapered shape attached to each of said longitudinal edges of said capacitor PCB.

19. The motor of Claim 18 wherein said channels have a tapered shape corresponding to the tapered shape of said drafted stiffeners, and wherein said drafted stiffeners are slideably inserted in said tapered channels.